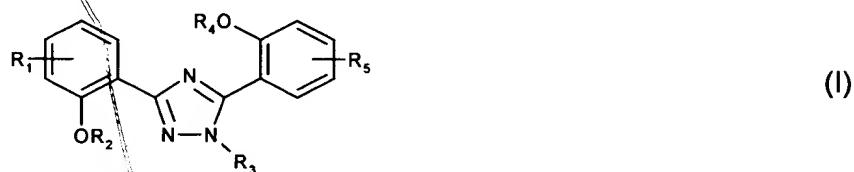


WHAT IS CLAIMED IS:

1. A method of treating diseases which cause an excess of metal in the human or animal body or are caused by it comprising administering to a subject in need of such treatment a therapeutically effective amount of a compound of formula I



in which

R₁ and R₅ simultaneously or independently of one another are hydrogen, halogen, hydroxyl, lower alkyl, halo-lower alkyl, lower alkoxy, halo-lower alkoxy, carboxyl, carbamoyl, N-lower alkylcarbamoyl, N,N-di-lower alkylcarbamoyl or nitrile;

R₂ and R₄ simultaneously or independently of one another are hydrogen, unsubstituted or substituted lower alkanoyl or aroyl, or a protective group;

R₃ is hydrogen, lower alkyl, hydroxy-lower alkyl, halo-lower alkyl, carboxy-lower alkyl, lower alkoxy carbonyl-lower alkyl, R₆R₇N-C(O)-lower alkyl, unsubstituted or substituted aryl or aryl-lower alkyl, or unsubstituted or substituted heteroaryl or heteroaralkyl;

R₆ and R₇ simultaneously or independently of one another are hydrogen, lower alkyl, hydroxy-lower alkyl, alkoxy-lower alkyl, hydroxyalkoxy-lower alkyl, amino-lower alkyl, N-lower alkylamino-lower alkyl, N,N-di-lower alkylamino-lower alkyl, N-(hydroxy-lower alkyl)amino-lower alkyl, N,N-di(hydroxy-lower alkyl)amino-lower alkyl or, together with the nitrogen atom to which they are bonded, form an azaalicyclic ring;

or a pharmaceutically acceptable salt thereof.

2. The method according to claim 1 wherein the metal is iron.

3. A pharmaceutical preparation comprising at least one compound of formula I according to claim 1, in which

proviso that R_3 is not phenyl, substituted by halogen, nitro, nitrile, hydroxyl, lower alkyl, halo-lower alkyl, lower alkoxy or lower alkoxy carbonyl, if R_2 and R_4 are hydrogen and R_1 and R_5 are hydrogen, halogen, lower alkyl, halo-lower alkyl or lower alkoxy; R_6 and R_7 simultaneously or independently of one another are hydrogen, lower alkyl, hydroxy-lower alkyl, alkoxy-lower alkyl, hydroxy alkoxy-lower alkyl, amino-lower alkyl, N-lower alkylamino-lower alkyl, N,N-di-lower alkylamino-lower alkyl, N-(hydroxy-lower alkyl)amino-lower alkyl, N,N-di(hydroxy-lower alkyl)amino-lower alkyl or, together with the nitrogen atom to which they are bonded, form an azaalicyclic ring; or a salt thereof.

7. A compound of formula II according to claim 5, in which

R_1 and R_5 simultaneously or independently of one another are hydrogen, halogen or lower alkyl; R_2 and R_4 are hydrogen; R_3 is $R_6R_7N-C(O)-$ lower alkyl, substituted aryl, substituted by carboxyl or $R_8R_9N-C(O)-$, aryl-lower alkyl, substituted by N-lower alkylamino, N,N-di-lower alkylamino or pyrrolidino, or unsubstituted or substituted heteroaralkyl; R_6 and R_7 simultaneously or independently of one another are hydrogen, lower alkyl, hydroxy-lower alkyl, alkoxy-lower alkyl, hydroxy alkoxy-lower alkyl, amino-lower alkyl, N-lower alkylamino-lower alkyl, N,N-di-lower alkylamino-lower alkyl, N-(hydroxy-lower alkyl)amino-lower alkyl or N,N-di(hydroxy-lower alkyl)amino-lower alkyl or, together with the nitrogen atom to which they are bonded, form an azaalicyclic ring; R_6 and R_9 simultaneously or independently of one another are hydrogen or lower alkyl or, together with the nitrogen atom to which they are bonded, form an azaalicyclic ring; or a pharmaceutically acceptable salt thereof.

8. A compound selected from the group consisting of

{4-[3,5-bis(2-hydroxyphenyl)-[1,2,4]triazol-1-yl]phenyl}-(4-methylpiperazin-1-yl)methanone; {4-[3,5-bis(2-hydroxyphenyl)-[1,2,4]triazol-1-yl]phenyl}morpholin-4-ylmethanone; 2-[3,5-bis(2-hydroxyphenyl)-[1,2,4]triazol-1-yl]-1-(4-methylpiperazin-1-yl)ethanone; 2-[3,5-bis(2-hydroxyphenyl)-[1,2,4]triazol-1-yl]-1-morpholin-4-yl-ethanone;

2-[3,5-bis(2-hydroxyphenyl)-[1,2,4]triazol-1-yl]-N,N-bis(2-hydroxyethyl)acetamide;
2-[3,5-bis(2-hydroxyphenyl)-[1,2,4]triazol-1-yl]-N,N-dimethylacetamide;
2-[3,5-bis(2-hydroxyphenyl)-[1,2,4]triazol-1-yl]-N-(2,3-dihydroxypropyl)acetamide;
2-[3,5-bis(2-hydroxyphenyl)-[1,2,4]triazol-1-yl]-N-(2-dimethylaminoethyl)-N-methylacetamide;
2-[3,5-bis(2-hydroxyphenyl)-[1,2,4]triazol-1-yl]-N-(2-hydroxy-1-hydroxymethylethyl)acetamide;
2-[3,5-bis(2-hydroxyphenyl)-[1,2,4]triazol-1-yl]-N-(2-hydroxyethyl)acetamide;
2-[3,5-bis(2-hydroxyphenyl)-[1,2,4]triazol-1-yl]-N-(2-hydroxyethyl)-N-methylacetamide;
2-[3,5-bis(2-hydroxyphenyl)-[1,2,4]triazol-1-yl]-N-(2-methoxyethyl)acetamide;
2-[3,5-bis(2-hydroxyphenyl)-[1,2,4]triazol-1-yl]-N-(2-morpholin-4-yl-ethyl)acetamide;
2-[3,5-bis(2-hydroxyphenyl)-[1,2,4]triazol-1-yl]-N-[2-(2-hydroxyethoxy)ethyl]acetamide;
2-[3,5-bis(2-hydroxyphenyl)-[1,2,4]triazol-1-yl]-N-[2-(4-methylpiperazin-1-yl)ethyl]acetamide;
2-[3,5-bis(2-hydroxyphenyl)-[1,2,4]triazol-1-yl]-N-methylacetamide;
2-[3,5-bis(5-chloro-2-hydroxyphenyl)-[1,2,4]triazol-1-yl]-N-(2-morpholin-4-yl-ethyl)acetamide;
3,5-bis(2-hydroxyphenyl)-1-(4-diethylaminobenzyl)-1H-[1,2,4]triazole;
3,5-bis(2-hydroxyphenyl)-1-(4-pyrrolidin-1-ylbenzyl)-1H-[1,2,4]triazole;
3,5-bis(2-hydroxyphenyl)-1-(pyridin-3-ylmethyl)-1H-[1,2,4]triazole;
3,5-bis(2-hydroxyphenyl)-1-(pyridin-4-ylmethyl)-1H-[1,2,4]triazole;
3,5-bis(5-chloro-2-hydroxyphenyl)-1-(4-dimethylaminobenzyl)-1H-[1,2,4]triazole;
3,5-bis(5-chloro-2-hydroxyphenyl)-1-(pyridin-2-ylmethyl)-1H-[1,2,4]triazole;
4-[3,5-bis(2-hydroxy-5-methylphenyl)-[1,2,4]triazol-1-yl]benzoic acid;
4-[3,5-bis(2-hydroxyphenyl)-[1,2,4]triazol-1-yl]benzoic acid;
4-[3,5-bis(5-chloro-2-hydroxyphenyl)-[1,2,4]triazol-1-yl]benzoic acid;
4-[3,5-bis(5-fluoro-2-hydroxyphenyl)-[1,2,4]triazol-1-yl]benzoic acid;
N-{2-[bis(2-hydroxyethyl)amino]ethyl}-2-[3,5-bis(2-hydroxyphenyl)-[1,2,4]triazol-1-yl]acetamide;
N-benzyl-2-[3,5-bis(2-hydroxyphenyl)-[1,2,4]triazol-1-yl]-N-methylacetamide;
or a pharmaceutically acceptable salt thereof.

9. A compound according to claim 8 which is 4-[3,5-bis(2-hydroxyphenyl)-[1,2,4]triazol-1-yl]benzoic acid.

R_1 and R_5 simultaneously or independently of one another are hydrogen, halogen, hydroxyl, lower alkyl, halo-lower alkyl, lower alkoxy, halo-lower alkoxy, carboxyl, carbamoyl, N-lower alkylcarbamoyl, N,N-di-lower alkylcarbamoyl or nitrile;

R_2 and R_4 simultaneously or independently of one another are hydrogen, unsubstituted or substituted lower alkanoyl or aroyl, or a protective group;

R_3 is hydrogen, lower alkyl, hydroxy-lower alkyl, halo-lower alkyl, carboxy-lower alkyl, lower alkoxy carbonyl-lower alkyl, $R_6R_7N-C(O)$ -lower alkyl, unsubstituted or substituted aryl, aryl-lower alkyl, substituted by N-lower alkylamino, N,N-di-lower alkylamino or pyrrolidino, or unsubstituted or substituted heteroaryl or heteroaralkyl;

R_6 and R_7 simultaneously or independently of one another are hydrogen, lower alkyl, hydroxy-lower alkyl, alkoxy-lower alkyl, hydroxyalkoxy-lower alkyl, amino-lower alkyl, N-lower alkylamino-lower alkyl, N,N-di-lower alkylamino-lower alkyl, N-(hydroxy-lower alkyl) amino-lower alkyl, N,N-di(hydroxy-lower alkyl)amino-lower alkyl or, together with the nitrogen atom to which they are bonded, form an azaalicyclic ring;

and salts thereof; and at least one pharmaceutically acceptable carrier.

4. A pharmaceutical preparation comprising at least one compound of formula I according to claim 1, in which

R_1 and R_5 simultaneously or independently of one another are hydrogen, halogen, hydroxyl, lower alkyl, halo-lower alkyl, lower alkoxy or halo-lower alkoxy;

R_2 and R_4 simultaneously or independently of one another are hydrogen or a protective group;

R_3 is lower alkyl, hydroxy-lower alkyl, carboxy-lower alkyl, lower alkoxy carbonyl-lower alkyl, $R_6R_7N-C(O)$ -lower alkyl, substituted aryl, aryl-lower alkyl, substituted by N-lower alkylamino, N,N-di-lower alkylamino or pyrrolidino, or unsubstituted or substituted heteroaryl or heteroaralkyl;

R_6 and R_7 simultaneously or independently of one another are hydrogen, lower alkyl, hydroxy-lower alkyl, alkoxy-lower alkyl, hydroxyalkoxy-lower alkyl, amino-lower alkyl, N-lower alkylamino-lower alkyl, N,N-di-lower alkylamino-lower alkyl, N-(hydroxy-lower alkyl) amino-lower alkyl, N,N-di(hydroxy-lower alkyl)amino-lower alkyl or, together with the nitrogen atom to which they are bonded, form an azaalicyclic ring;

and salts thereof; and at least one pharmaceutically acceptable carrier.

5. A compound of formula II



*Sub
B1*
in which

R_1 and R_5 simultaneously or independently of one another are hydrogen, halogen, lower-alkyl, halo-lower alkyl, lower alkoxy, halo-lower alkoxy, carboxyl, carbamoyl, N-lower alkylcarbamoyl, N,N-di-lower alkylcarbamoyl or nitrile;

R_2 and R_4 simultaneously or independently of one another are hydrogen, unsubstituted or substituted lower alkanoyl or aroyl, or a protective group;

R_3 is $R_6R_7N-C(O)$ -lower alkyl, unsubstituted or substituted aryl, aryl-lower alkyl, substituted by N-lower alkylamino, N,N-di-lower alkylamino or pyrrolidino, or unsubstituted or substituted heteroaryl or heteroaralkyl, with the proviso that

R_3 is not phenyl or phenyl substituted by halogen, nitro, nitrile, hydroxyl, lower alkyl, halo-lower alkyl, lower alkoxy or lower alkoxy carbonyl if R_2 and R_4 are hydrogen, and R_1 and R_5 are hydrogen, halogen, lower alkyl, halo-lower alkyl, lower alkoxy or nitrile;

R_6 and R_7 simultaneously or independently of one another are hydrogen, lower alkyl, hydroxy-lower alkyl, alkoxy-lower alkyl, hydroxyalkoxy-lower alkyl, amino-lower alkyl, N-lower alkylamino-lower alkyl, N,N-di-lower alkylamino-lower alkyl, N-(hydroxy-lower alkyl)amino-lower alkyl, N,N-di(hydroxy-lower alkyl)amino-lower alkyl or, together with the nitrogen atom to which they are bonded, form an azaalicyclic ring;

or a salt thereof.

6. A compound of formula II according to claim 5, in which

R_1 and R_5 simultaneously or independently of one another are hydrogen, halogen, lower alkyl, halo-lower alkyl, lower alkoxy or halo-lower alkoxy;

R_2 and R_4 simultaneously or independently of one another are hydrogen or a protective group;

R_3 is $R_6R_7N-C(O)$ -lower alkyl, substituted aryl, aryl-lower alkyl, substituted by N-lower alkylamino, N,N-di-lower alkyl amino or pyrrolidino, or unsubstituted or substituted heteroaralkyl with the

10. A pharmaceutical composition comprising a pharmaceutically acceptable carrier or diluent and a therapeutically effective amount of a compound of claim 5, or a pharmaceutically acceptable salt thereof.

11. A method of treating iron overload comprising administering to a subject in need of such treatment a therapeutically effective amount of a compound of claim 5, or a pharmaceutically acceptable salt thereof.